CLAIMS

What is claimed is:

1. A Semiconductor mounting apparatus comprising:

a chip gripper which is moveable back and forth between a first location and a second location by means of a lever mechanism, in order to lift a chip from a chip carrier at the first location and to lay the chip on a substrate at the second location;

a first pivoted lever which is seated on a shaft mounted equidistantly between said first location and said second location, and is driven in alternating pivoting directions between two end positions in which the pivoted lever is directed towards one or the other location; and

a second pivoted lever seated on the end of the first pivoted lever and driven the opposite way around with respect to the direction of pivoting thereof and with a predetermined gear ratio with respect to the pivoting movement thereof, and which at its end is connected to the chip gripper, wherein said gear ratio and the lengths of said first and second pivoted levers are matched to each other such that in the two end positions of the first pivoted lever, the two pivoted levers are in an extended position with respect to one another and the chip gripper has arrived over one or the other location.

2. A Semiconductor mounting means according to claim 1, characterised in that the two pivoted levers pivot in planes which are perpendicular to the substrate.

3. A Semiconductor mounting apparatus according to claim 1or 2, characterised in that the range of pivoting between the end positions of the first pivoted lever equals 180°, the gear ratio between the two pivoted levers equals 2, and the ratio of lengths of the two pivoted levers equals 1.

4. A Semiconductor mounting means according to claim 2, characterised in that on the end of the second pivoted lever there is coupled a slide which can be displaced along a guide member and carries the chip gripper.

5. A Semiconductor mounting means according to claim 1, characterised in that the two pivoted levers pivot in planes which lie parallel to the substrate.

6. A Semiconductor mounting means according to claim 5, characterised in that the pivoting range between the end positions of the first pivoted lever equals 120°, the gear ratio between the two pivoted levers equals 3, and the ratio of lengths of the two pivoted levers equals 2.

7. A Semiconductor mounting means according to claim 5, characterised in that the chip gripper is rigidly connected to the end of the second pivoted lever.

8. A Semiconductor mounting means according to claim 5, characterised in that at the end positions, delimiter means for the second pivot lever are arranged laterally to the direction of movement of the chip gripper.

9. A Semiconductor mounting means according to claim 1, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is, in turn driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.

10. A Semiconductor mounting means according to claim 2, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is , in

turn, driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.

11. A Semiconductor mounting means according to claim 5, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is , in turn, driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.

12. A Semiconductor mounting means according to claim 6, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is , in turn, driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.

13. A Semiconductor mounting means according to claim 7, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is, in turn, driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.

14. A Semiconductor mounting means according to claim 8, characterised in that the second pivoted lever is seated on a shaft upon which a toothed wheel is seated, which is , in turn, driven by a toothed wheel fixed on and coaxial to the drive shaft via a toothed belt or an intermediate wheel mounted on the first pivoted lever.